

APPENDIX G COMMENTS ON THE DEIS FROM FEDERAL, STATE, AND LOCAL AGENCIES

- ▶ Letter from the United States Environmental Protection Agency, Region 8, Montana Office
- ▶ Letter from the United States Department of Interior, Office of Environmental Policy and Compliance



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8, MONTANA OFFICE
FEDERAL BUILDING, 10 West 15th Street, Suite 3200
HELENA, MONTANA 59626

JUL 16 2003

Ref: 8MO

July 15, 2003

Mr. Brian Donner, Planning Team Leader
Tally Lake Ranger District
Flathead National Forest
1355 Highway 93 West
Whitefish, MT 59937

Re: Logan Creek Ecosystem Restoration Project
Environmental Impact Statement

Dear Mr. Donner:

The Environmental Protection Agency (EPA) Region VIII Montana Office has reviewed the Draft Environmental Impact Statement (DEIS) for the Logan Creek Ecosystem Restoration Project. The EPA reviews EISs in accordance with its responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. Section 309 of the Clean Air Act directs EPA to review and comment in writing on the environmental impacts of any major federal agency action. EPA's comments include a rating of both the environmental impact of the proposed action and the adequacy of the NEPA document.

The EPA is supportive of the Logan Creek Ecosystem Restoration project purpose and need to reduce hazardous fuels and fire risk, restore historic vegetative conditions, sustain wildlife habitat, improve water quality and aquatic habitat, and provide timber to support the local economy in the area. However, the EPA has concerns that the proposed action, Alternative B, would increase water yields, peak flows, and sediment delivery in tributaries to Logan Creek, and that this may be inconsistent with recovery of Logan Creek, which is on Montana's 1996 Clean Water Act Section 303(d) list of impaired waters. As you know a Federal District Court Order requires that Total Maximum Daily Loads (TMDLs) with associated water quality restoration plans must be developed for waters on the 1996 303(d) list. It is important that proposed logging and road management activities in the Logan Creek drainage avoid further degradation of the 303(d) listed stream, and be consistent with the State's development of TMDLs to restore water quality and beneficial use support. We recommend that the Forest Service contact the MDEQ to assure that the MDEQ considers the Forest Service's proposed actions to be consistent with the State's TMDL development to restore water quality (contact Carole Mackin of MDEQ in Helena at 444-7425 or George Mathieus at 444-7423).



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Alternative E appears to reduce the amount of timber harvest and road building in drainages heavily impacted by past road building and timber harvest, thus, offering greater potential for reducing water quality impacts and promoting long-term water quality improvement with road rehabilitation and road reclamation. Alternative E, however, may have other potential adverse impacts to other resources such as old growth habitat and wildlife (e.g., inconsistency with Canada Lynx Conservation Assessment and Strategy; may affect—likely to adversely affect the threatened Canada lynx; and may increase fragmentation of old growth habitat).

We suggest development of a modified preferred alternative for the final EIS to better optimize environmental and resource management trade-offs while addressing project purpose and need (i.e., picking and choosing harvest and burn units and road management and restoration activities from among the current action alternatives). In general, desirable features we consider worthy of including in a modified preferred alternative include:

- ☞ avoid excessive water yield, channel erosion and sediment transport, and maximize fish and watershed improvement and recovery of impaired waters (i.e., maximize road obliteration/improvement, stream stabilization, aquatic habitat improvement, and revegetation);
- ☞ reduce fuel loadings in high fire risk areas, particularly urban interface areas, and restore desired vegetative conditions, while protecting other resource values (e.g., wildlife habitat and security, air and water quality, old growth, forest connectivity, control of noxious weeds);
- ☞ restrict motorized vehicle access and reduce road density adequately to protect wildlife and wildlife habitat and watersheds while allowing for necessary management and reasonable public access.

Some specific suggestions to assist in constructing a modified preferred alternative to better optimize environmental and resource management trade-offs are included in our more detailed comments, which are enclosed. We note of course that the Forest Service will need to evaluate and analyze the impacts of any new modified alternative, and display those impacts in the FEIS. Inclusion or discussion of additional alternative evaluation in the FEIS may also better explain to the public the trade-offs involved in making land management decisions, and may lead to improved public acceptance of decisions.

We also recommend that the FEIS include further analysis and documentation of potential long-term water quality improvements and benefits resulting from the proposed project in order better demonstrate TMDL consistency. We agree that proposed improvements in road drainage (i.e., installing waterbars, drain dips, and ditch relief culverts), and decommissioning roads, removing culverts and armoring stream channels at former road stream crossings are practical ways to improve water quality in the long-term. It would be helpful if the long-term water quality benefits of these restoration activities were better described or quantified and compared to sediment production and transport from proposed timber harvest and road building activities. Additional information that helps demonstrate that long-term water quality

improvements from road rehabilitation and reclamation activities and fisheries habitat improvements more than compensates for any short-term adverse effects associated with timber harvest and road construction would help better demonstrate consistency with TMDL development for Logan Creek. We also believe it is important that aquatic monitoring be carried out to validate that BMPs protect water quality and fish habitat, and that proposed restoration activities in the Logan Creek drainage are consistent with long-term water quality recovery for support of beneficial uses and TMDL development.

Finally, we understand that efforts are underway to collect additional water quality assessment and monitoring data for Logan Creek to reevaluate beneficial use impairments justifications for placing Logan Creek on the 1996 303(d) list. There may be a possibility that additional data could result in removing Logan Creek from the 303(d) list. Removal of Logan Creek from the 303(d) list would relieve the TMDL preparation requirement for the State, and relieve concerns regarding consistency of management actions in the Logan Creek drainage with TMDL development. The requirement to maintain and protect water quality to support designated beneficial uses would of course remain in place.

The EPA's further discussion and more detailed questions, comments, and concerns regarding the analysis, documentation, or potential environmental impacts of the Logan Creek Ecosystem Restoration Project are included in the enclosure with this letter. Based on the procedures EPA uses to evaluate the adequacy of the information and the potential environmental impacts of the proposed action and alternatives in an EIS, the Logan Creek Ecosystem Restoration Project DEIS has been rated as Category EC-2 (Environmental Concerns - Insufficient Information). A copy of EPA's rating criteria is attached.

As can be seen from the enclosed comments, our concerns are associated with potential effects on water quality and the need to demonstrate consistency with TMDL development for Logan Creek, and include a minimal level of aquatics monitoring. There are also concerns about potential adverse effects to old growth and wildlife habitat. EPA encourages development of a modified preferred alternative to better optimize the environmental and resource management trade-offs. We believe additional information is needed to fully assess and mitigate all potential impacts of the management actions.

The EPA appreciates the opportunity to review and comment on the DEIS. If we may provide further explanation of our concerns please contact Mr. Steve Potts of my staff in Helena at (406) 457-5022 or in Missoula at 406-329-3313.

Sincerely,



John F. Wardell
Director
Montana Office

U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements

Definitions and Follow-Up Action*

Environmental Impact of the Action

LO - - Lack of Objections: The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC - - Environmental Concerns: The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO - - Environmental Objections: The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU - - Environmentally Unsatisfactory: The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 - - Adequate: EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 - - Insufficient Information: The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 - - Inadequate: EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

EPA COMMENTS ON LOGAN CREEK ECOSYSTEM RESTORATION PROJECT DRAFT ENVIRONMENTAL IMPACT STATEMENT

Brief Project Overview:

The Tally Lake Ranger District of the Flathead National Forest has evaluated five alternatives, including no action, for vegetation treatments and other activities to restore watershed health and sustain forest ecosystems in the Logan Creek area. The Logan Creek project area is located in Flathead County approximately 12 air miles west of Whitefish, Montana, and comprises 61,300 acres (48,300 acres National Forest). The purpose of the proposed project is to reduce hazardous fuels and restore or maintain historic vegetation patterns (cover and structure), reduce fire risk, sustain wildlife habitat, improve water quality and aquatic habitat, and provide timber to the economy. The project area includes 9 streams in addition to Logan Creek (Eyers, Sanko, Reid, Oetiker, Taylor, Bill, Meadow, Pike and Cyclone Creeks). Implementation of alternatives would take place over a ten year period.

Alternative A is the no action alternative. Alternative B, the proposed action, would treat 6,624 acres with commercial timber harvest, 3,783 acres with precommercial thinning, 821 acres of prescribed burning, 3.7 miles of woody debris placement in streams, construction of pools at 5 stream sites, and 90 acres of riparian plantings for wildlife habitat. In addition, 16.2 miles of roads will be reclaimed (decommissioned), 141 miles of road rehabilitated, 4.4 miles of new road construction and 5.4 miles of temporary road construction, and 6.9 miles of additional road closure.

Alternative C was developed using Alternative B as a base with modifications to maintain and enhance security values for elk, deer, cavity nesters and other wildlife species. Alternative C would treat 4,235 acres with commercial timber harvest, 3,783 acres with precommercial thinning, 821 acres of prescribed burning, 3.7 miles of woody debris placement in streams, construction of stream pools at 5 sites, and 90 acres of riparian plantings for wildlife habitat. In addition, 16.2 miles of roads will be reclaimed, 99 miles of road rehabilitated, 2.7 miles of new road construction and 3.6 miles of temporary road construction, and 6.9 miles of additional road closure.

Alternative D was designed to respond to concerns about old growth habitat, forest fragmentation, and Canada lynx, while addressing urban interface and areas with heavy tree mortality. Alternative D would treat 4,724 acres with commercial timber harvest, 310 acres with precommercial thinning, 763 acres of prescribed burning, 3.7 miles of woody debris placement in streams, construction of pools at 5 sites, and 90 acres of riparian plantings for wildlife habitat. In addition, 16.2 miles of roads will be reclaimed, 124 miles of road rehabilitated, 2.7 miles of new road construction and 4.3 miles of temporary road construction, and 6.9 miles of additional road closure.

Alternative E responds to water quality, water yield and sediment and fish habitat issues. Alternative E would treat 6,315 acres with commercial timber harvest, 3,783 acres with pre-

commercial thinning, 821 acres of prescribed burning, 3.7 miles of woody debris placement in streams, construction of pools at 5 sites, and 90 acres of riparian plantings for wildlife habitat. In addition, 16.6 miles of roads will be reclaimed, 138 miles of road rehabilitated, 4.7 miles of new road construction and 4.9 miles of temporary road construction, and 7.5 miles of additional road closure.

Comments:

Alternatives

1. Thank you for including detailed alternatives descriptions, maps, tables, and especially matrices (Tables 2-10, 2-11) in the DEIS for comparison of effects of alternatives (beginning on page 2-48) and effectiveness in addressing project purpose and need. The alternatives descriptions, maps, tables and matrices greatly assist in facilitating project understanding and improved comparative evaluation of alternatives and sharp definition of issues, providing a clearer basis of choice among options for the decisionmaker and the public.

We note that the permanent new roads to be constructed are not very clear on the alternatives maps due to using dotted black lines for trails and dotted dark blue lines for new roads. The dotted black and dark blue lines are hard to distinguish from one another. Perhaps a starker color contrast could be used in the final EIS to more clearly identify locations of proposed new roads vs. trails.

2. We support the intention in Alternative E of reducing the amount of timber harvest and road building in drainages that have been heavily impacted (Reid, Bill, Cyclone and Pike Creeks) in order to minimize further water yield increases in these streams. We particularly support improvements of road drainage and road BMPs (installing waterbars, drain dips, and ditch relief culverts); improvements to Logan Creek road 913 to reduce chronic sediment deposition in Logan Creek; replacement of the road adjacent to Reid Creek and upgrading and improving culverts on the Reid Creek road (page 2-32); and decommissioning roads and removing culverts and armoring stream channels (page 3-141). Such activities should contribute to improving water quality and improving support of beneficial uses.

The EPA recognizes that land management decisions involve environmental and resource management trade-offs (i.e., trade-offs in impacts among vegetation treatments, fire and fuels, old growth, wildlife, water quality and aquatics and other resource impacts). We consider it appropriate to balance environmental and resource management trade-offs to address project purpose and need (i.e., reducing hazardous fuels and fire risk; restoring or maintaining historic vegetation patterns; sustaining wildlife habitat, improving water quality and aquatic habitat, and providing timber to the economy), while minimizing adverse impacts, in an effort to optimize the trade-offs.

We recommend that such optimizing of trade-offs be considered for the Logan Creek Ecosystem Restoration Project by evaluating individual treatment units and road management options in the current action alternatives and developing a modified preferred alternative (e.g., Alternative F) to optimize the environmental and resource management trade-offs while addressing project purpose and need. In general desirable features we consider worthy of including in a modified preferred alternative include:

- ☛ avoid excessive water yield, channel erosion and sediment transport, and maximize fish and watershed improvement and recovery of impaired waters (i.e., road obliteration/improvement, stream stabilization, aquatic habitat improvement, and revegetation);
- ☛ reduce fuel loadings in high fire risk areas, particularly urban interface areas, and restore desired vegetative conditions, while protecting other resource values (e.g., wildlife habitat and security, air and water quality, old growth, forest connectivity, control of noxious weeds);
- ☛ restrict motorized vehicle access and reduce road density adequately to protect wildlife and wildlife habitat and watersheds while allowing for necessary management and reasonable public access.

Some more specific suggestions we have for developing a modified preferred alternative would be to start with Alternative E (that includes harvest and burn units and road management to minimize water quality impacts), and considering modifications such as:

- drop Unit 32A for old growth protection. and reshape Unit 127A to avoid skid trails through old growth, and reevaluate need to harvest unit 138A within an RHCA;
- reevaluate units 127A, 127, 73, 73A, 74, 88 in the heavily impacted Reid, Bill, Cyclone and Pike Creeks drainages. Can these units be harvested without further adverse impacts to the Logan Creek drainage?
- modify Alternative E harvest units to provide consistency with all recommendations, standards and guidelines in the Canada Lynx Conservation Assessment and Strategy, and avoid a “likely to adversely affect” opinion on the Canada lynx;
- include adequate fuels reduction activities to reduce fire risk in urban interface areas;
- reevaluate whether all proposed road construction is necessary (e.g., 4.7 miles of permanent new road and 4.9 miles of temporary road in Alternative E), since road construction provides some of the more significant impacts to water quality and wildlife, and all possible measures should be taken to minimize new road construction (and to locate roads where they have minimal impacts);

- increasing to the maximum extent possible road drainage and BMP improvements to existing roads (that funding allows) to reduce sediment production/transport to surface waters, and maximizing culvert replacements to reduce blockage of fish passage (except where such blockage is desired to protect native fish populations);

- maximizing decommissioning of roads and reductions in existing “high intensity” road densities, since improved watershed conditions and wildlife habitat and security are associated with reduced road densities;

- maximizing tree and shrub plantings on light to moderate retention level harvest units to promote rapid revegetation and habitat enhancement;

- maintain and restore wildlife travel connections and reduce fragmentation of wildlife habitat-reevaluate roads #18 and #22 in light of their impact upon old growth and connectivity-reevaluate units 32, 32A, and 136 in old growth habitat-reevaluate units 17, 17A, and 19 in big game habitat;

Inclusion or discussion of additional alternative evaluation in the FEIS may also better explain to the public the trade-offs involved in making land management decisions, and may lead to improved public acceptance of decisions. We note of course that the Forest Service will need to evaluate and analyze the impacts of any new modified alternative, and display those impacts in the FEIS.

3. We would be very concerned about selection of Alternative B, since Alternative B would have the highest level of ground disturbing activities in Reid, Bill, Cyclone and Pike Creeks that already are experiencing high water yield do to prior management activities. A high level of additional management activities in these watersheds and would likely increase channel erosion (page 3-140), which may be inconsistent with recovery of impaired Logan Creek. It is stated that Alternative B would increase water yields, peak flows, and sediment delivery to streams in most sub-drainages in the Logan Creek area (page S-7). Alternative B also includes timber harvest in old growth habitat including regeneration harvest in 4994 acres of mature forests, which would reduce these habitats by 17 percent across the analysis area (page 3-217); and Alternative B would sever or narrow forest connections for wildlife travel corridors (page 3-218); and would be inconsistent with the Canada Lynx Conservation Assessment and Strategy, and “May affect—likely to adversely affect” the threatened Canada lynx (page 3-303).

Water Resources, Fisheries, Aquatics

4. It is stated that all action alternatives include construction of large fish habitat pools in the lower reaches of Logan Creek near Round Meadows. It is not clear how these pools will be constructed. Is it proposed that heavy equipment will be used in stream channels to excavate pools? Are boulders or woody debris placements intended to allow for natural scouring of pools? Is a mixture of these options proposed? It would be helpful if further

information was provided regarding the construction of pools in streams.

We note that activities involving stream channel construction, or placement of woody debris or large boulders in stream channels could have adverse effects if improperly carried out (e.g., directing stream flows against stream banks to erode banks and destabilize stream channels). We recommend that aquatic biologists and staff with training and knowledge of alluvial geomorphology be consulted during design of woody debris placements and construction of stream pools. We note that the DEIS only mentions the need for a 124 permit from the Montana Dept. of Fish, Wildlife and Parks (page 3-144). We also recommend that the Army Corps of Engineers, U.S. Fish & Wildlife Service, and Montana Dept. of Environmental Quality (MDEQ) be contacted if dredging or placement of fill material or structures in stream channels is proposed to assure that all proper authorizations and permits are obtained (e.g., 404 permits, 310 or 124 permits, 318 turbidity exemptions, etc.). We encourage you to contact Mr. Allan Steinle of Corps Montana Office in Helena at 406-441-1375 in regard to potential need for a 404 permit for pool construction and/or woody debris and boulder placement.

5. Table 3-55 (page 3-131) quantifies the high road densities in the Logan Creek project area (e.g., Cyclone Creek = 5.6 mile/sq. mile; Logan Headwaters = 4.8 mile/sq. mile; Bill Creek = 4.1 mile/sq. mile). The DEIS indicates that the road densities in the Logan Creek area are considered “high intensity” (i.e., greater than 1.7 mile/sq. mile), resulting in loss of stream channel integrity (page 3-132). We very much agree with the statement in the DEIS that watersheds with few or no roads are critically important for native fish recovery (page 3-150). Reductions in road density, improvements in road drainage, and reductions in sediment delivery from roads are important components for improving aquatic health in project area streams. The USFWS in its 1998 Bull Trout Interim Conservation Guidance identified the importance of road densities for bull trout conservation, showing general exclusion of bull trout in watersheds with high road densities (e.g., over 1.7 mi/mi² of roads), and showing bull trout strongholds to have low road densities (e.g., an average 0.45 mi/mi² of roads).

Road construction is one of the more significant aspects of a project in terms of environmental effects, even temporary roads, since road construction greatly increases the possibility of erosion and sediment transport. The EPA fully supports improvements to forest road systems and reductions in road density, since these are critical to protecting aquatic health and wildlife resources for the project area. The amount of new permanent road construction proposed with each alternative (Table 3-69, page 3-202) is:
Alternative B: 4.4 miles of new permanent road, 5.4 miles of temporary road
Alternative C: 2.7 miles of new permanent road, 3.6 miles of temporary road
Alternative D: 2.7 miles of new permanent road, 4.3 miles of temporary road
Alternative E: 4.7 miles of new permanent road, 4.9 miles of temporary road.

This appears like a relatively high amount of new road construction in an area that is already impacted by high intensity road densities and high intensity past timber harvests.

Are the proposed 2.7 to 4.7 miles of new permanent road and 3.6 to 5.4 miles of temporary road in the action alternatives all necessary? Can some of the proposed new roads be considered for temporary roads that would be obliterated after the project to further reduce road density following project completion? Do locations of all new roads avoid sensitive soils, stream crossings and riparian areas as much as possible? Also, while we are very pleased that significant amounts of road rehabilitation (i.e., 99 to 141 miles) and road decommissioning (i.e., 16.2 to 16.7 miles) are proposed, we would encourage consideration of additional road reclamation (decommissioning) to reduce road density below the high intensity level of impact and promote further recovery of the Logan Creek watershed. The DEIS states that there appears to be a direct relationship between increase of forest use and wildland-urban interface density with human caused fire occurrence (page 3-81), and that there are insufficient funds to maintain roads and trails (page 2-45). Further reduction in road density may, therefore, reduce occurrences of human caused fires, and demands on road maintenance funds.

For your information, EPA's general areas of concern regarding roads (including temporary roads) include the number of road stream crossings; road drainage and surface erosion, interception and routing sediment to streams; culvert sizing and potential for washout; culvert allowance of fish migration and effects on stream structure; seasonal and spawning habitats; large organic material supplies; and riparian habitats. Culverts should be properly sized to handle flood events and should be properly aligned with the stream channel. Undersized culverts should be replaced and culverts which are not properly aligned or which present fish passage problems and/or serve as barriers to fish migration should be adjusted. Open bottom culverts that simulate stream grade and substrate and that provide adequate capacity for flood flows and bedload are recommended to minimize adverse fisheries effects of stream crossings.

We also support inspections and evaluations to identify existing road conditions that cause or contribute to nonpoint source pollution and stream impairment. Erosion control should be kept current with log skidding activities and that road maintenance (e.g., blading) be focused on reducing road surface erosion and sediment delivery from roads to area streams. Blading of unpaved roads in a manner that contributes to road erosion and sediment transport to streams and wetlands should be avoided. It is important to maintain crowns on roads and to provide adequate dips and/or waterbars to promote drainage off roads.

6. The DEIS states that Reid, Bill, Cyclone and Pike Creeks have experienced high water yield levels in recent years due to harvests and tree mortality and caution should be used in proposing management activities that could further increase water yield (pages 3-129, 3-134, 3-140). The discussion of past timber management (page 3-132) shows that past timber harvests are also considered "high intensity" (i.e., greater than 25% of the watershed), since harvests occurred on approximately 40% of the National Forest in the Logan Creek area (page 3-14), which also contributes to loss of stream channel integrity. This high level of prior impacts from road construction and past timber harvests should

be considered in evaluating and determining proposed new road construction and timber harvest activities in the Logan Creek area. Alternative E seems to consider the high level of past activities in the Reid, Bill, Cyclone and Pike Creek drainages by proposing reduced amounts of timber harvest and road building in these drainages. However, even Alternative E appears to include some light and moderate retention timber harvests within watersheds of Reid, Bill, Cyclone and Pike Creeks (e.g., units 127A, 127, 73, 73A, 74, 88). Are such harvest units consistent with avoiding further degradation of these Logan Creek tributaries? It also appears that some new roads are proposed in the Reid Creek watershed. Are these new roads consistent with watershed recovery?

7. Several references are made to an Exhibit G for identification of stream segments with a “fair” channel stability rating. We could not locate Exhibit G in the DEIS. It would be helpful if the stream channel segments with “fair” channel stability ratings could be identified in the FEIS, so that assessments could be made on the potential impacts to these channels by proposed treatment units and road management.
8. It is noted (page 3-143) that Logan Creek was designated as water quality limited by the State of Montana in 1996 (i.e., on 1996 Montana 303(d) list). A Federal District Court Order in June of 2000 (reaffirmed in September 2000) requires that water bodies on Montana’s 1996 303(d) list have Total Maximum Daily Loads (TMDLs) prepared, with associated water quality restoration plans, to promote their recovery.

The TMDL process identifies the maximum load of a pollutant (e.g., sediment, nutrient) a waterbody is able to assimilate and fully support its designated uses; allocates portions of the maximum load to all sources; identifies the necessary controls that may be implemented voluntarily or through regulatory means; and describes a monitoring plan and associated corrective feedback loop to insure that uses are fully supported; or can also be viewed as, the total amount of pollutant that a water body may receive from all sources without exceeding WQS; or as a reduction in pollutant loading that results in meeting WQS.

Montana’s approach is to include TMDLs as one component of comprehensive Water Quality Restoration Plans (WQRPs). TMDLs/WQRPs contain seven principal components:

1. Watershed characterization (hydrology, climate, vegetation, land use, ownership, etc.)
2. Description of impairments and applicable water quality standards.
3. Pollutant source assessment and estimate of existing pollutant loads.
4. Water quality goals, restoration targets (including TMDLs) and load allocations.
5. Restoration strategy
6. Monitoring Strategy
7. Public involvement (30 day public comment period, informational meetings, etc.)

The load allocations and targets established by TMDLs/WQRPs inform land managers how much sediment, nutrient or other pollutant discharge may be too much (i.e., prevent support of beneficial uses). A WQRP provides a means to track the health of a stream over time. If a WQRP has not restored beneficial uses within five years, the Montana DEQ conducts an assessment to determine if:

- * the implementation of new and improved best management practices is necessary;
- * water quality is improving but more time is needed to comply with WQS; or
- * revisions to the plan will be necessary to meet WQS.

Montana has divided the State into TMDL Planning Areas, grouping streams with similar water quality problems and land ownership as much as possible on a watershed basis. Each TMDL planning area may include 4 to 10 impaired watersheds that have specific TMDL preparation needs. Logan Creek is in the Flathead-Stillwater TMDL Planning Area with TMDLs due in 2005. We note that this 2005 TMDL due date appears to contradict the TMDL due date of 2007 reported in the DEIS (page 3-144).

Pending completion of a TMDL in Montana, new and expanded nonpoint source activities may commence and continue, provided those activities are conducted in accordance with “reasonable soil, land and water conservation practices” (MCA 75-5-703). The Administrative Rules of Montana (17.30.602) define these as “methods, measures, or practices that protect present and reasonably anticipated beneficial uses.”

The EPA believes land management activities carried out in the watershed of 303(d) listed streams should not further degrade impaired streams in the long-term, and should be consistent with TMDLs and WQRPs. Such consistency is most easily demonstrated in situations where TMDLs are not yet prepared if restoration activities are carried out in association with activities that may produce pollution so that control of existing pollution sources more than compensates for pollutants generated during management activities. This will allow overall net long-term water quality improvement to result from a proposed project. We also note that significant sources of pollutant loading may occur in unlisted tributaries, and TMDLs must account for all sources of pollution, hence the need to identify and address pollution sources throughout the watershed, often including unlisted waters.

It is important, therefore, that proposed logging and road construction activities in the Logan Creek drainage do not further degrade the 303(d) listed stream, and be consistent with the State’s development of TMDLs to restore water quality and beneficial use support. We agree with the statement in the DEIS that improvements in road drainage (i.e., installing waterbars, drain dips, and ditch relief culverts), and decommissioning roads, removing culverts and armoring stream channels at former road stream crossings (page 3-141), should improve water quality in the long-term, and accordingly we believe such activities will help provide consistency with the TMDL.

We note that the DEIS states that the WATSED model was not used to predict changes in sediment for the Logan Creek project (page 3-142). However, WATSED was used to model annual water yield increases of alternatives (Table 3-56). It is our understanding that if the WATSED model was run for water yield outputs it would not be too difficult to have it also output sediment production estimates. Although WATSED sediment modeling has limitations, sediment production estimates may be of interest for comparison of estimated sediment production differences between alternatives, and may also provide information regarding potential long-term water quality benefits associated with the road rehabilitation and reclamation activities. Additional information that helps demonstrate that long-term water quality improvements from road rehabilitation and reclamation activities and fisheries habitat improvements more than compensates for any short-term adverse effects associated with timber harvest and road construction would be helpful in demonstrating consistency of management actions with TMDL development for Logan Creek.

We recommend that the Forest Service contact the MDEQ to assure that the MDEQ considers the Forest Service's proposed actions to be consistent with the State's TMDL development to restore water quality (contact Carole Mackin of MDEQ in Helena at 444-7425 or George Mathieus at 444-7423).

Finally, we understand that efforts are underway to collect additional water quality assessment and monitoring data for Logan Creek to reevaluate beneficial use impairments justifications for placing Logan Creek on the 1996 303(d) list. There may be a possibility that additional data could result in removing Logan Creek from the 303(d) list. Removal of Logan Creek from the 303(d) list would relieve the TMDL preparation requirement for the State, and relieve concerns regarding consistency of management actions in the Logan Creek drainage with TMDL development. The requirement to maintain and protect water quality to support designated beneficial uses would of course remain in place.

It may be of interest to also know that EPA is appealing portions of the year 2000 Montana TMDL Federal District Court Order, in an effort to allow the most up-to-date and accurate water quality assessment information to be used in 303(d) listings for determining TMDL requirements, and also to allow additional time for TMDL development. This legal action may also offer possibilities for reducing TMDL requirements for Logan Creek.

9. We are pleased that sensitive soils have been evaluated and considered during the timber harvest analysis and that only one harvest unit, unit 101A, is located on a sensitive soil type (page 2-2). We are pleased that unit 101A is proposed for skyline yarding and broadcast underburning to avoid heavy equipment use on the sensitive soil. Would harvest during winter on snow and frozen ground reduce soil impacts even further?

10. EPA considers the protection, improvement, and restoration of wetlands and riparian areas to be a high priority. Wetlands and riparian areas increase landscape and species diversity, and are critical to the protection of designated water uses. Executive Order 11990 requires that all Federal Agencies protect wetlands. In addition national wetlands policy has established an interim goal of **No Overall Net Loss of the Nation's remaining wetlands**, and a long-term goal of increasing quantity and quality of the Nation's wetlands resource base. Wetland impacts should be avoided, and then minimized, to the maximum extent practicable, and then unavoidable impacts should be compensated for through wetland restoration, creation, or enhancement.

We are pleased that 7,000 acres of Riparian Habitat Conservation Areas (RHCAs) have been identified in the Logan Creek area (page 3-242), and that all action alternatives include and INFISH requirements would be followed to protect riparian areas, ponds, and seep/springs (page 3-297), and that disturbed soil from road reclamation would be reseeded, with culvert removal sites mulched with straw, and shrubs planted adjacent to culvert removal sites to stabilize soils (page 2-3). While it is stated that all the action alternatives have some short-term, adverse impacts to fish habitat (page 3-184), we are pleased that the action alternatives meet Forest Plan riparian standards, stream shading and sediment production. Thank you also for stating that all wet areas within timber sale would be clearly marked with flagging on the ground to allow contractors to avoid such areas (page 3-137).

It is stated that unit 138A will involve timber harvest with RHCAs (page 3-243). We could not locate unit 138A on the alternatives maps. Why must unit 138A within an RHCA be harvested?

11. It is stated that the Island/Squaw cattle allotment partially causes “extremely poor habitat” for cutthroat trout in upper Griffin Creek (page 3-183). What is being done to improve grazing practices in this allotment to address habitat degradation caused by grazing practices?
12. Monitoring should be an integral part of any management decision. The EPA endorses the concept of adaptive management whereby effects of implementation activities are determined through monitoring (i.e., ecological and environmental effects). It is through the iterative process of setting goals and objectives, planning and carrying out projects, monitoring impacts of projects, and feeding back monitoring results to managers so they can make needed adjustments, that adaptive management works. In situations where impacts are uncertain, monitoring programs allow identification of impacts, so they may be mitigated. Monitoring and feedback of monitoring results to managers is critical to the success of a land management plan.

The EPA particularly believes that water quality/aquatics monitoring is a necessary and crucial element in identifying and understanding aquatic impacts, and for determining effectiveness in BMPs in protecting water quality and beneficial uses. The achievement

of water quality standards for non-point source activities occurs through the implementation of BMPs. Although BMPs are designed to protect water quality, they need to be monitored to verify their effectiveness. If found ineffective, the BMPs need to be revised, and impacts mitigated. DEIS Appendix C correctly notes that monitoring should be in place to assure that BMPs are adequate to protect beneficial uses.

We believe that proposed monitoring programs should be disclosed in NEPA documents. The brief DEIS discussion of watershed and fisheries monitoring (page 2-13) indicates that sediment sources (at stream crossings and road construction sites) would be monitored to assess the need for stabilization to protect fish habitat, and that areas with disturbed soil as a result of logging or road reclamation would be monitored for revegetation. Mention is made of “ongoing monitoring” on page 3-142. This “ongoing monitoring” of streams in the project area should be further described in the final EIS.

We are pleased that these watershed monitoring activities are proposed, but we also believe that some level of stream channel or water quality or fisheries habitat monitoring would be useful to validate that BMPs protect water quality and fish habitat, and that proposed activities in the Logan Creek drainage (on 1996 303(d) list) are consistent with long-term water quality recovery and TMDL development. Adequate resources to support a minimal level of aquatic monitoring is needed to assure that effects on water quality will be identified and mitigated, and that management activities avoid further degradation of impaired waters and are consistent with TMDLs.

Examples of potential aquatic monitoring parameters that could be considered for Logan Creek include channel cross-sections, bank stability, width/depth ratios, riffle stability index, pools, large woody debris, fine sediment, pebble counts, macroinvertebrates, etc.. The EPA especially appreciates inclusion of macroinvertebrates and periphyton monitoring. Monitoring of the aquatic biological community is desirable since the aquatic community integrates the effects of pollutant stressors over time and, thus, provides a more holistic measure of impacts than grab samples.

As an example of a good monitoring plan for NEPA disclosure enclosed is the monitoring plan for the Moose Post-Fire project (also on the Flathead National Forest). For your information, the EPA encourages use of the following reference materials in designing and disclosing a monitoring program:

Monitoring Guidelines to Evaluate Effects of Forestry Activities in the Pacific Northwest and Alaska; Lee H. McDonald, Alan W. Smart and Robert C. Wissmar; May 1991; EPA/910/9-91-001; (We appreciate the fact that the Moose Post-Fire Monitoring Plan in Appendix E already references these guidelines)

“Aquatic Habitat Indicators and Their Application to Water Quality Objectives Within the Clean Water Act, Stephen B. Bauer and Stephen C. Ralph, 1999, EPA-910-R99-014. (This publication is available on-line at, <http://www.pocketwater.com/>).

Aquatic and Riparian Effectiveness Monitoring Plan for the Northwest Forest Plan, Gordon H. Reeves, David B. Hohler, David P. Larsen, David E. Busch, Kim Kratz, Keith Reynolds, Karl F. Stein, Thomas Atzet, Polly Hays, and Michael Tehan, February 2001. Available on-line at, <http://www.reo.gov/monitoring/watershed/aremp-compile.htm>

Rapid Bioassessment Protocols for use in Streams and Rivers; James A. Plafkin, May 1989, EPA/444/4-89-001.

The Forest Service Region 5 document entitled, Water Quality Management for Forest System Lands in California: Best Management Practices, September 2000, is a useful reference for BMP development and BMP effectiveness monitoring. It can be found at the website, <http://fsweb.r5.fs.fed.us/unit/ec/water/water-best-mgmt.pdf>.

Montana Forestry BMP's; Extension Publications; July 1991, Montana State University; EB0096.

"Montana Stream Management Guide: for Landowners, Managers, and Stream Users", Montana Dept. Of Environmental Quality; December 1995.

Vegetation

13. We fully support proposals to plant trees and shrubs in timber harvest units with light to moderate retention levels (page 2-6). We note that page 2-6 indicates the total maximum area to be treated would be 100 to 500 acres, however, the reforestation discussions in Chapter 3 note that all stand groups with light to moderate retention would require reforestation with planting for Alternative C on 1602 acres, and for Alternative D on 1840, and for Alternative E on 2731 acres (pages 3-43, 3-48, 3-54)). These acreage amounts for planting are much higher than the 100 to 500 acres mentioned on page 2-6. This inconsistency should be explained.

We encourage maximizing the amount of plantings to promote reforestation. We also fully support tree and shrub planting on 90 acres near water sources that experienced timber harvesting in the past to promote wildlife browse and cover (pages 1-23, 2-6). We also suggest that riparian areas and any streambanks that are identified with eroding and sensitive reaches be considered for planting with shrubs and trees to provide bank and channel stability, sediment filtration, shade, woody debris recruitment, and other functions, and to promote establishment of healthy communities of riparian vegetation.

14. We are pleased that all mature trees within at least one tree length of the stream would be retained in all alternatives (page 3-160). How are "mature" trees defined?
15. It is stated that all live larch and Ponderosa pine greater than 18 inches in diameter, and two Douglas fir per acre greater than 25 inches in diameter would be retained to meet Amendment 21 requirements for snag retention (page 2-5), and this retention requirement

is also extended to dead larch and Ponderosa pine on page 3-235. It would be of interest to know how the 18 inch and 25 inch tree diameter limits were determined for Amendment 21? Given all the past timber harvest activities that have occurred (i.e., 40% of project area has experienced regeneration or intermediate harvest, page 3-14) it would appear that there may not be many trees with such large diameters remaining. Are the approximate numbers of larch and Ponderosa pine trees greater than 18 inches in diameter and Douglas fir over 25 inches in diameter to be retained known? Will such tree retention limits allow for adequate snags, and snag replacement trees, and adequate middle sized larch, Ponderosa pine and Douglas fir trees to promote increased numbers of large desirable fire resistant tree species in the future?

It is also not clear how the tree retention information page 2-5 relates to the harvest prescriptions described in the vegetation section of Chapter 3, that for example indicates that light retention harvest would leave approximately 5 live trees per acre or that shelterwood harvests would leave between 15 and 30 of the largest larch and Douglas fir trees per acre (pages 3-31, 3-33). It is our understanding that the light retention harvests would only be proposed in timber stands of lodgepole pine or mixed conifers that did not contain large larch and Ponderosa pine or large healthy Douglas fir. Is that correct? We would be concerned about light and perhaps moderate retention harvests that removed too many large and even middle sized larch and Ponderosa pine and Douglas fir, since we believe the large and middle sized trees of these more desirable fire resistant species should be retained so their numbers will increase in the future. It is important that future timber stands with large fire resistant tree species be promoted, and this is most easily done if large and middle sized larch, Ponderosa pine and Douglas fir are allowed to become larger.

If increased numbers of large fire resistant tree species are desired, consideration should be given to reducing diameter limits for retention of larch, Ponderosa pine and Douglas fir (e.g., reduce larch and Ponderosa pine retention diameter limits to 14 inches, and Douglas fir to 18 inches), and/or perhaps specifying retention of a certain number of middle sized trees of desirable species per acre so they are allowed to become large fire resistant trees.

16. Bark beetles are natives of the ecosystem and local endemic populations of beetles are a normal component of the ecosystem and all trees are susceptible to attack and mortality of bark beetles. This is a normal ecosystem function, and it is our understanding that even large populations of bark beetles and resulting tree mortality can be part of normal ecosystem function. We recognize that much of the public perceives epidemic beetle populations as an unhealthy forest environment. However, beetle populations generally experience “boom and bust cycles, and forests have proven resilient, if not dependent on these cycles. While from the perspective of a forest manager, beetle attacked trees are at risk, this may also be part of a natural progression to a new successional sere. Beetle infestation may be part of the natural disturbance and regeneration agent in the ecosystem. Many forests that have undergone “devastating” infestations are now

experiencing regeneration without active management before or prior to the epidemic.

We believe there should be ongoing beetle monitoring to confirm beetle presence and tree mortality and the risk of beetle epidemics. We also believe it would be helpful if the FEIS evaluated in greater detail options for utilizing pheromone treatments to trap and repel beetles, burning/peeling infested logs to destroy brood, and chemical treatments as well as harvest of infested or vulnerable trees as ways to reduce epidemic beetle infestations.

17. The DEIS states that most forests have evolved with the continual influence of fire (page 3-76), and that fire suppression has altered fire regimes. The DEIS also indicates that the existing Forest Plan requires that all fires be suppressed. It is known that forests have heavy fuel loads and vegetative conditions which have departed from natural historic ranges as a result of past fire suppression (and in many cases earlier over harvest of large fire resistant trees), yet the Forest Plan direction continues to indicate heavy reliance on fire suppression. This appears to be contrary to our increasing recognition that natural fire disturbances should be restored in the forest ecosystem. If a long term goal is to restore natural vegetative conditions and natural disturbance processes, there is a need to be more aggressive in restoring fire into the forest ecosystem by promoting more frequent prescribed burns and reduced fire suppression.

We support thinning forests from below where feasible (leaving the large fire adapted trees instead of logging them as has been done in the past), and introducing more frequent understory fire to the forest ecosystem, and also allowing more natural fires to burn, and letting people who build in fire adapted ecosystems accept more of the risk for their decisions. There also appears to be a need to promote increased education about the natural role of fire in forested ecosystems, and about recent home ignitability research that indicates that with proper use of less flammable home building materials and management of fuel loads near structures in forests, the structures can be protected. We hope that the next revision to the Forest Plan will allow more aggressive restoration of natural fire disturbance processes to the forest ecosystem.

18. Noxious weeds tend to gain a foothold where there is disturbance in the ecosystem, such as wildfire. Among the greatest threats to biodiversity is the spread of noxious weeds and exotic (non-indigenous) plants, since many noxious weeds out-compete native plants and produce a mono-culture that has little or no plant species diversity or benefit to wildlife. Thank you for including the discussion of invasive plants and noxious weeds in the DEIS (pages 3-59 to 3-69), and discussion of weed control and containment (page 3-62).

EPA fully supports control of noxious weed infestations. While burning and other ground disturbance (such as logging) can stimulate or promote weed problems, we note that burning followed by herbicide use can bring effective weed control. We also note that if weed control chemicals are used they can be toxic and have the potential to be transported to surface or ground water following application. It is important that if

herbicides are used, the water contamination concerns of herbicide usage be fully evaluated and mitigated. Herbicides used in the project area should be used in a safe manner to ensure protection of surface water ecological integrity, and maintain public health and safety, and no spraying should occur in wetlands or other aquatic areas.

For your information, the website for EPA information regarding pesticides and herbicides is <http://www.epa.gov/pesticides/>. The National Pesticide Telecommunication Network (NPTN) website at <http://nptn.orst.edu/tech.htm> which operates under a cooperative agreement with EPA and Oregon State University and has a wealth of information on toxicity, mobility, environmental fate on pesticides that may be helpful (phone number 800-858-7378).

Air Quality

19. Slash pile and underburning associated with harvesting operations as well as prescribed underburning to reduce fuels and restore fire disturbances are proposed. As you are aware, smoke from such burns contains air pollutants, including tiny particulates which can cause health problems, especially for people suffering from respiratory illnesses, and can reduce visibility and diminish the appreciation of scenic vistas. Particulate concentrations that exceed health standard have been measured downwind of burns.

We are pleased that proposed burning will be carried out in cooperation with the Montana/Idaho State Airshed Group Smoke Management Program that schedules burning during weather conditions favorable for smoke dispersion (page 3-113). Conduct of burning in accordance with the Montana/Idaho Airshed Smoke Management Program is consistent with the Federal Interim Air Quality Policy for Wildland and Prescribed Fires. A copy of the *Interim Air Quality Policy* can be found at: www.epa.gov/ttn/oarpg/t1pgm.html, and a fact sheet can be found at: www.epa.gov/ttn/oarpg/t1/fact_sheets/firefl.pdf.

We note that smoke management programs like the Montana/Idaho State Airshed Group program depend on favorable meteorological conditions to disperse smoke. However, despite best efforts to predict favorable conditions the weather can shift causing smoke not to disperse as intended. We are pleased that the DEIS acknowledges that there may be short-term temporary air quality impacts from smoke (page 3-114), .

Thank you for presenting Table 3-51 (page 3-118) with estimated FOFEM PM-10 and PM-2.5 emissions and downwind concentrations, and Table 5-32 (page 3-121) comparing PM-10 emissions by alternative. As you know Whitefish, Columbia Falls and Kalispell are designated non-attainment for particulates, and that Glacier National Park and the Bob Marshall Wilderness Complex are Class 1 air quality areas that should be protected. It appears that prevailing westerly to southwesterly winds may cause smoke from prescribed burns to contribute smoke to sensitive areas. While smoke from proposed prescribed burning may impact air quality and visibility we also recognize that these effects will be

minimized by carrying out burning during periods of good smoke dispersion in accordance with the Montana/Idaho Smoke Management Program.

Wildlife

20. We are concerned about potential loss of habitat for old growth species such as pileated woodpeckers and barred owls (page 3-226). It is stated that the Round Meadow, Cyclone Creek, and Taylor Creek areas would lose about half their nesting habitat for 50 years. Although, the DEIS also states that in most of these areas there appears to be sufficient amount of other feeding habitat within the home range. Are project modifications possible that would address purpose and need, but also would reduce adverse impacts to nesting and feeding habitat of these old growth species? We encourage reevaluation of proposed roads through old growth habitat and harvest units to reduce potential impacts upon such habitats and upon wildlife dependent on old growth habitat.
21. We are pleased that snags and downed woody debris would be retained to serve as wildlife habitat and for soil productivity (e.g., 32 downed logs per acre or 5 to 25 tons acre (page 3-236), and that monitoring has shown cooperation by firewood cutters in protecting marked higher quality wildlife habitat snags of high value snags near roads (page 3-238).
22. The DEIS states that Alternatives B, C, and E are not consistent with all of the recommendations, standards and guidelines in the Canada Lynx Conservation Assessment and Strategy, and that the biological assessment on the threatened Canada lynx is, "May affect—likely to adversely affect" (page 3-303). We believe that the preferred alternative that is developed for the final EIS should include appropriate project revisions and modifications to be consistent with the recommendations of the Canada Lynx Conservation Assessment and Strategy, and avoid a likely to adversely affect determination.



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July 15, 2003

JUL 18 2003

Cathy Barbouletos, Forest Supervisor
Flathead National Forest
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Kalispell, Montana 59901

Dear Ms. Barbouletos:

The Department of the Interior has reviewed the Draft Environmental Impact Statement for the Logan Creek Ecosystem Restoration Project, Flathead National Forest, Tally Lake Ranger District, Flathead County, Montana and has no comments.

Sincerely,

Robert F. Stewart
Regional Environmental Officer

cc:

✓ Bryan Donner, Planning Team Leader
Tally Lake Ranger District
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